CLAIMS

What is claimed is:

A method for emulating on a single display platform an application's user interface as it would appear on each of a number of target devices, given a set of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said method comprising

combining a selected one or more of said device characteristics and a selected one of said application formal descriptions; and

providing a simultaneous and consistent display representation for said selected application, thereby providing a stylized rendering of said selected application's interface in a uniform appearance and in which said selected application's interface for a plurality of said target devices can selectively be viewed simultaneously.

- 2. The method of claim 1, wherein said display representation is synchronized, thereby providing a simultaneous update to all of said selected target device representations when information in a device-independent portion of said formal description is changed.
- 3. A method for emulating on a single display platform an application's user interface as it would appear on target device, said method comprising:

combining device characteristic information for said target device and a formal description information for said application; and YOR920010355US1

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providing a stylized rendering of said application's interface.

4. The method of claim 3, wherein said device characteristic information is given for a plurality of target devices to be emulated, further comprising:

selecting certain of said plurality of target devices to emulate, and providing a simultaneous and consistent display representation for said application, thereby providing a stylized rendering of said application's interface in a uniform appearance and in which the application's interface for said selected plurality of said target devices can selectively be viewed simultaneously.

5. A method to emulate on a single display platform an appearance of a user-interface of any of at least one application as it would appear on a plurality of target devices, wherein a set of device characteristics for any said target device to be emulated and a formal description of any said application to be emulated is available in a memory, said method comprising:

retrieving from said memory a device-independent specification information for a user interface for a selected application;

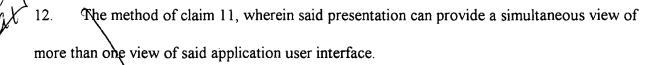
retrieving from said memory a device-dependent information for said selected application for a selected one or more of said target devices; and

combining said device-independent model information and said device-dependent information into a single format for a stylized representation on a display device.

6. The method of claim 5, further comprising: YOR920010355US1

forming said display device presentation such that said stylized representation of said plurality of target devices can selectively be viewed on said display device individually or in a simultaneous view involving more than one said target device stylized representation.

- 7. The method of claim 6, wherein said combining of said device-independent model information and said device-dependent information is synchronized, thereby causing all said simultaneous views to simultaneously change whenever said device-independent specification information is changed.
- 8. The method of claim 5, wherein said single format is used to render an abstract representation of said appearance of said user-interface for said selected target device.
- 9. The method of claim 8, wherein said abstract representation comprises a polygonal area for each of a user-interface entity in said user-interface.
- 10. The method of claim 8, wherein said abstract representation comprises a text field describing a generic content of each of a user-interface entity in said user-interface.
- 11. The method of claim 5, wherein said selected application comprises a plurality of views for said user interface.



- 13. The method of claim 12, wherein said more than one view is presented in one of the following formats:
 - a tiled layout;
 - a cascaded layout; and
 - a one-at-a-time layout having operator selection to select a view.
- 14. The method of claim 6, wherein said simultaneous view is presented in one of the following formats:
 - a tiled layout;
 - a cascaded layout; and
 - a one-at-a-time layout having operator selection to select a view.
- A system to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given a set of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said system comprising:

means for combining a selected one or more of said device characteristics and a selected one of said application formal descriptions; and

means for providing a simultaneous and consistent display representation for said selected application.

16. The system of claim 15, further comprising:

means for synchronizing said display representation when information in a device-independent portion of said formal description is changed.

An apparatus to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given a set of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said apparatus comprising:

a layout generator for combining a selected one or more of said device characteristics and a selected one of said application formal descriptions; and

a layout manager for providing a simultaneous and consistent display representation for said selected application.

- 18. The apparatus of claim 17, wherein said layout generator further synchronizes said display representation when information in a device-independent portion of said formal description is changed.
- 19. A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given a set of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said set of instructions comprising:

a layout generator for combining a selected one or more of said device characteristics and a selected one of said application formal descriptions; and

a layout manager for providing a simultaneous and consistent display representation for said selected application.

- The medium of claim 19, wherein said layout generator further synchronizes said display representation when information in a device-dependent portion of said formal description is changed.
- A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given a set of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said set of instructions comprising:

combining a selected one or more of said device characteristics and a selected one of said application formal descriptions; and

providing a simultaneous and consistent display representation for said selected application, thereby providing a stylized rendering of said selected application's interface in a uniform appearance and in which said selected application's interface for a plurality of said target devices can selectively be viewed simultaneously.

22. A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given a set of device YOR920010355US1

characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said set of instructions comprising:

combining device characteristic information for said target device and a formal description information for said application; and

providing a stylized rendering of said application's interface.

23. A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given stored in a memory a set of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said set of instructions comprising:

retrieving from said memory a device-independent specification information for a user interface for a selected application;

retrieving from said memory a device-dependent information for said selected application for a selected one or more of said target devices; and

combining said device-independent model information and said device-dependent information into a single format for a stylized representation on a display device.

24. A signal-bearing medium tangibly embodying a program of machine-readable instructions executable by a digital processing apparatus to emulate on a single display an application's user interface as it would appear on each of a number of target devices, given stored in a memory a set

of device characteristics for any device to be emulated and a formal description of one or more applications to be emulated, said set of instructions comprising:

means for combining a selected one or more of said device characteristics and a selected one of said application formal descriptions; and

means for providing a simultaneous and consistent display representation for said selected application.